IMPORTANT EMERGENCY INFORMATION ENCLOSED

Learn what to do in an emergency before the emergency happens.

The information provided in this booklet will help you respond to many types of emergencies. For more information, visit the Department of Homeland Security's citizen preparedness website: www.ready.gov.

There is an extensive glossary at the back of this brochure that explains many of the terms described.

Your Emergency Response Checklist:

- Remain calm
- Don't rush to the site of the incident
- Watch television or listen to the radio for information from authorities
- Use phone lines only for emergency communication
- Follow the directions of emergency personnel
- Follow your pre-established family/work/school plan

EVACUATION

If you are told to evacuate, grab your kit and go. Wear sturdy shoes and clothing that provide some protection, such as long pants, long-sleeved shirts, and a cap. Take one car per household to keep your household together and reduce traffic congestion and delay. In the absence of evacuation instructions from local authorities, you should evacuate if you feel you and your household are threatened or endangered. Use pre-designated evacuation routes and if there is time, let others know what you are doing and your destination.

If there is time, secure your home. Close and lock doors and windows. Unplug appliances. If a hard freeze is likely during your absence, take actions needed to prevent damage to water pipes by freezing weather, such as:

- Turn off water main
- Drain faucets
- Turn off inside valves for external faucets and open the outside faucets to drain

You should always let others know where you are going.

Always follow recommended evacuation routes. Do not take shortcuts. They may be blocked. Be alert for washed out roads and bridges. Do not drive into flooded areas. Stay away from downed power lines.

SHELTER-IN-PLACE

Sheltering-in-place can take several forms. Sheltering-in-place is appropriate when conditions require that you seek protection in your home, your workplace or another location where you may be located when disaster strikes. Sheltering-in-place may either be short-term, such as going to a safe room for a fairly short period while a tornado warning is in effect or while a chemical cloud passes. It may also be longer term, as when you stay in your home for several days without electricity or water services following a winter storm. The term "shelter" is also used for mass care facilities that provide a place to stay along with food and water to people who evacuate following a disaster. Make sure you read the following information, because where you should shelter during an emergency is different depending on the emergency. For instance, during a tornado warning you should go to an underground room, with few windows if you can. During a chemical release, you should go to an interior room on the highest floor possible.

HOW TO SHELTER-IN-PLACE

1. Bring your family and pets inside.

2. Lock doors, close windows, air vents and fireplace dampers.

3. Turn off fans, air conditioning and forced air heating systems.

4. Take your emergency supply kit unless you have reason to believe it has been contaminated. At minimum, bring a radio.

5. Choosing a Safe Room: Go into an interior room with as few windows and doors as possible, (if a room with a bathroom is available, sterilize the tub with a bleach solution and fill it with water as soon as you enter—see "Water" under "Flood" for more information). For a biological or chemical emergency, you should shelter above ground if possible. For a radiological or nuclear emergency, you should shelter below ground if possible. The average family can stay in the sealed room

for several hours, according to the following calculation: 40 cubic feet per person per hour, (Multiplying the length of the room in feet times the width times the ceiling height gives you the cubic feet of air in the room, if it's an 8 foot ceiling 40 cubic feet would be approximately five 12 inch floor tiles per person per hour).

6. Seal all windows, doors and air vents with plastic sheeting and tape. Consider measuring and cutting the plastic sheeting in advance to save time.

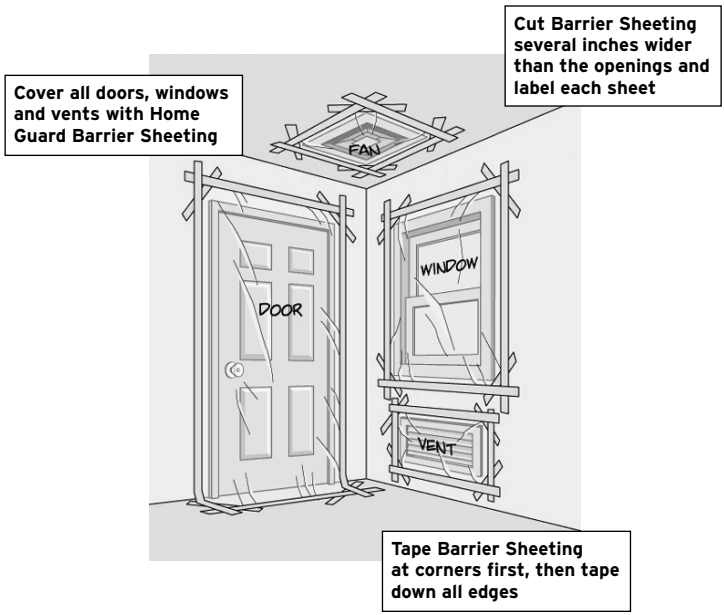
a. Measure and cut the plastic sheeting so that it is a couple of inches wider and taller than the door, window, vent, electrical outlet or other area where air can get in.

b. Secure the plastic sheeting with the included tape. Don't forget to seal around the bottom of any doors.

7. Be prepared to improvise and use what you have on hand to seal gaps so that you create a barrier between yourself and any contamination.

8. Local authorities may not immediately be able to provide information on what is happening and what you should do. However, you should watch TV, listen to the radio or check the Internet often for official news and instructions as they become available.

WARNING Do not sleep while in a sealed room or remain in room after breathable air supply has been depleted. Do not smoke, light candles or burn anything as this will use up the available oxygen in the room.



Biological Agents

A biological attack is the deliberate release of germs or other biological substances that can cause illness. An agent must be inhaled, enter through a cut in the skin or be eaten to make you sick. Some biological agents, such as anthrax, do not cause contagious diseases. Others, like the smallpox virus, can be passed from person to person.

A biological incident may not be immediately obvious and may take emergency personnel some time to identify. You could learn of the danger through an emergency radio or TV broadcast, or some other signal used in your community. You might get a telephone call or emergency response workers may come to your door.

If you suspect that a biological agent has been released, be prepared to improvise to cover your nose, mouth, eyes and cuts in your skin. Cover your nose and mouth with either a N95 dust mask or a cotton t-shirt and seek advice from emergency officials. Take care not to increase your exposure to the agent or to spread it. Get away quickly. When you reach safety, remove clothing, put it in a garbage bag or other plastic bag and seal it. Wash with soap and water thoroughly, but take care not to scrub the contaminate into the skin. Contact authorities.

At the time of a declared biological emergency, if a family member becomes sick, it is important to be suspicious. Do not automatically assume, however, that you should go to an emergency room or that any illness is the result of the biological attack. Symptoms of many common illnesses may overlap. Use common sense, practice good hygiene and cleanliness to avoid spreading germs, and seek medical advice.

Chemical Agents

A chemical attack is the deliberate release of a toxic gas, liquid or solid that can poison people and the environment. Some chemical agents can have an immediate effect; others can take several hours. You may know that there has been a chemical incident if there are many dead or sick animals or birds on the ground or if the people in your vicinity become ill quickly. Signs of chemical exposure include watery eyes, twitching, choking, breathing difficulties or loss of coordination.

If you are exposed to a chemical agent, take immediate action by leaving the affected area or breaking a window to get fresh air.

Quickly assess where the chemical is coming from. If the chemical is inside your building, exit without passing through the contaminated area or break a window to get fresh air. If you can't get out of the building or find clean air without passing through the area where you see signs of a chemical attack, it may be better to move as far away as possible and "shelter-in-place." *You should seek shelter on a high floor because chemical agents tend to lay low to the ground. Do not go to a basement, if possible.*

If you are outside, quickly decide the fastest way to find clean air. Consider if you can get out of the area or if you should go inside the closest building and "shelter-in-place."

As soon you are in a safe location, if you think you have been exposed at all to a dangerous chemical, remove all clothing and put it in a garbage bag. Then, wash (don't scrub) with soap and water. Seek medical advice as soon as you can.

Earthquakes

Earthquakes can cause buildings and bridges to collapse, telephone and power lines to fall, and result in fires, explosions and landslides.

In the event of an earthquake, stay inside until the shaking stops and it is safe to go outside. Most injuries during an earthquake occur when people are hit by falling objects when entering or exiting buildings.

While inside, drop, cover, and hold on! Minimize your movements. Take cover under a sturdy desk, table or bench. If a desk or table isn't available, crouch in the corner and cover your face and head with your arms.

If you are outdoors, stay there and move away from buildings, streetlights and utility wires. If you are in a crowded public location, stay where you are – do not rush for the doorways. Take cover and grab something to shield your head and face. Do not use elevators. Grab your whistle from your emergency kit if you can and use it if you become trapped. Yell as a last resort.

After the shaking stops, it is important, if you have access to the meter or tank, to turn off the gas supply to your residence to reduce the likelihood of fire and explosion.

Explosions

No matter what the cause of the explosion, cover your nose and mouth with a N95 dust mask or a cotton fabric and seek immediate advice from emergency officials. If you are in a building that has been impacted, evacuate if it is safe to do so. If you are not in an affected building, seek advice from local officials.

Fire

Use water to put out small fires. Do not try to put out a fire that is getting out of control. Never use water on an electrical fire. Smother oil and grease fires with baking soda or salt. If your clothes catch on fire, **stop, drop and roll** until the fire is extinguished. If escaping through a door, use the back of your hand to feel the top of the door, the doorknob and crack between the door and door frame. If the door is warm or hot, do not open. Escape through a window. If you cannot escape, hang a light colored sheet outside the window alerting fire fighters to your presence. Cover your nose and mouth with a dust mask or cotton t-shirt if doing so does not delay your evacuation. If you must evacuate through smoke, crawl if you can, because smoke rises. Close doors behind you as you escape.

Floods

All floods are not alike. *Riverine floods* develop slowly, sometimes over a period of days. *Flash floods* can develop quickly, sometimes in just a few minutes, without any visible signs of rain. Flash floods often have a dangerous wall of roaring water that carries a deadly cargo of rocks, mud and other debris and can sweep away most things in its path. *Overland flooding* occurs outside a defined river or stream, such as when a levee is breached, but can still be destructive. Flooding can also occur from a dam break producing effects similar to flash floods.

Be aware of flood hazards no matter where you live, but especially if you live in a low-lying area, near water or downstream from a dam. Even very small streams, gullies, creeks, culverts, dry streambeds or low-lying ground that appear harmless in dry weather can flood.

If there is *any* possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move. Be aware of streams, drainage channels, canyons and other areas known to flood suddenly.

In all other cases, follow evacuation orders. If local authorities issue a flood watch, prepare to evacuate:

Secure your home: *If you have time,* tie down or bring outdoor equipment and lawn furniture inside. Move essential items to upper floors.

Utilities: If instructed, turn off utilities at the main switches or valves. Disconnect electrical appliances. *Do not touch* electrical equipment if you are wet or standing in water.

Water: During floods, there is a possibility that water sources could be contaminated or shut off. To prepare yourself and your family, fill the bathtub with water. Before filling the tub, sterilize it with a diluted bleach solution(dilute nine parts water to one part bleach).Use regular household liquid bleach that contains no soap or scents.

Do not walk through moving water. Six inches of moving water can knock you off your feet. If you must walk in a flooded area, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.

Do not drive into flooded areas. Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling. A foot of water will float many vehicles. Two feet of water will wash away almost all vehicles. If floodwaters rise around your car, abandon the car and move to higher ground, if you can do so safely. You and your vehicle can be quickly swept away as floodwaters rise.

Hurricanes

Hurricanes can produce widespread torrential rains. Floods are a deadly and destructive result. Excessive rain can also trigger landslides or mud slides, especially in mountainous regions.

Listen to local weather reports, if a hurricane "warning" is issued for your area, the storm could reach your community in 24 to 36 hours. Take steps at the first warning of a hurricane. Make sure that your supply kit is up-to-date and that you have a three-day supply of everything that you need if you have to shelter-in-place. Also prepare for a possible evacuation, make sure your car is full of fuel and you have an evacuation route planned. Listen to news reports for official evacuation instructions from local authorities. If you are told to evacuate, take your kit with you to the shelter. Evacuate to an inland location if:

- Local authorities announce an evacuation
- You live in a mobile home or temporary structure—they are particularly hazardous during hurricanes no matter how well fastened to the ground
- You live in a high-rise. Hurricane winds are stronger at higher elevations
- You live on the coast, on a floodplain near a river or inland waterway

If you are not required to or cannot evacuate, stay indoors during the hurricane and away from windows and glass doors. Keep curtains and blinds closed. Do not be fooled if there is a lull, it could be the eye of the storm and winds will pick up again.

- Turn off utilities if told to do so by authorities
- If not instructed to turn it off, turn your refrigerator to its coldest setting and keep closed.
- Turn off propane tanks at the main valve.

In strong winds, follow these rules:

- Take refuge in a small interior room, closet or hallway.

- Close all interior doors. Secure and brace external doors.
- In a two-story residence, go to an interior first-floor room, such as a bathroom or closet.
- In a multiple-story building, go to the first or second floors and stay in interior rooms away from windows.
- Lie on the floor under a table or another sturdy object.

Avoid using the phone except for serious emergencies. Local authorities need first priority on telephone lines.

Radiological Incidents

A "dirty bomb" is a conventional explosive that spreads radiological material. It is not a nuclear blast. While the initial blast will be obvious, the presence of radiological material may not be known until trained personnel arrive and test the scene. This radioactive material will not likely have an immediate impact, but it is dangerous and you must limit your exposure.

If you are outside and there is an explosion or authorities warn of a radiation release nearby, cover your nose and mouth and quickly go inside a building that has not been damaged. If you are already inside, check to see if your building has been damaged. If your building is stable, stay where you are. Close windows and doors, turn off air conditioners, heaters or other ventilation systems.

If you are inside and there is an explosion near where you are or you are warned of a radiation release *inside*, cover nose and mouth with cloth or a piece of clothing and go outside immediately. Look for a building or other shelter that has not been damaged and quickly get inside.
Once you are inside, close windows and doors, turn off air conditioners, heaters or other ventilation systems.

If you think you have been exposed to radiation, take steps to decontaminate as soon as you feel that it is safe to do so. Take off your clothes, put them in a garbage bag or other plastic bag and seal it. Then, wash with soap and water but do not scrub the contaminate into the skin.

Watch TV, listen to the radio, or check the Internet for official news as it becomes available.

To limit the amount of radiation you are exposed to, think about *shielding, distance* and *time*:

Shielding: If you have a thick shield, such as a concrete wall, between yourself and the radioactive materials, less of the radiation will be absorbed.

Distance: The farther away you are from the blast and the fallout, the lower your exposure.

Time: Minimizing exposure time will also reduce your risk.

Nuclear Incident

A nuclear blast is an explosion with intense light and heat, a damaging pressure wave and widespread radioactive material that can contaminate the air, water and ground surfaces for miles around. During a nuclear incident, it is important to avoid radioactive material, if possible.

In the event of a nuclear incident, avoid the radioactive fall-out of the "plume." Cover your nose and mouth and evacuate the area as quickly as possible. You want to limit your exposure to radioactive materials and their long-term effects. Covering your nose and mouth with a N95 dust mask or a multi-layered cotton fabric will help to limit radioactive material from entering the lungs.
If there is advanced warning of an attack: Take cover immediately, as far below ground as possible, though any shield or shelter will

help protect you from the immediate effects of the blast and the pressure wave. If there is no warning: Consider if you can get out of the area or if it would be better to go inside a building to limit the amount of radioactive material you are exposed to.

If you take shelter, go as far below ground as possible, close windows and doors, turn off air conditioners, heaters or other ventilation systems. Stay where you are, watch TV, listen to the radio, or check the Internet for official news as it becomes available.

To limit the amount of radiation you are exposed to, think about *shielding, distance* and *time*.

Shielding: If you have a thick shield, such as a concrete wall, between yourself and the radioactive materials more of the radiation will be absorbed, and you will be exposed to less.

Distance: The farther away you are from the blast and the fallout the lower your exposure.

Time: Minimizing time spent exposed will also reduce your risk.

If there is a significant radiation threat, health care authorities may or may not advise you to take potassium iodide. Potassium iodide is the same stuff added to your table salt to make it iodized. It may or may not protect your thyroid gland, which is particularly vulnerable, from radioactive iodine exposure. Consider keeping potassium iodide in your emergency kit, and learn what the appropriate doses are for each of your family members. Plan to speak with your health care provider in advance about what makes sense for your family.

Tornadoes

A tornado appears as a rotating, funnel-shaped cloud that extends to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long. Every state is at some risk from tornadoes.

In the event of a tornado watch or listen to newscasts. Be alert for approaching storms and watch for tornado danger signs:

- Dark, often greenish skies
- Large hail
- A large, dark, low-lying cloud (particularly if rotating)
- Loud roar, similar to a freight train.

If you are in your house during a tornado, take shelter in a storm cellar or basement. If underground shelter is not available seek shelter in an interior room or hallway on the lowest floor. Stay away from windows, doors and outside walls. Go to the center of the room. Stay away from corners because they attract debris. Get out of vehicles, trailers and mobile homes immediately and go to the lowest floor of a sturdy nearby building or storm shelter. If caught outside, lie in a nearby ditch or depression and cover your head with your hands. Be aware of potential flooding. Do not try to outrun a tornado.

GLOSSARY

The definitions below come from information provided by the Centers for Disease Control and Prevention. For more information about these topics go to: www.cdc.gov

Acute Radiation Syndrome is a serious illness that occurs when the entire body (or most of it) receives a high dose of radiation, usually over a short period of time. Symptoms of ARS, which can appear within minutes or days of radiation exposure, may include nausea, vomiting, diarrhea, loss of appetite, fatigue, fever, skin damage, and possibly even seizures and coma.

Ammonia is a colorless gas with a very sharp odor. Ammonia can be both naturally occurring and man made. Exposure to high concentrations of ammonia in the air may cause severe burns to your skin, eyes, throat, and lungs. In extreme cases, blindness, lung damage, or death could occur. Contact with the skin will cause burns and ingested ammonia,can cause burns to the mouth, throat, and stomach.

Anthrax is a serious bacterial disease that can make a person sick by being ingested (gastrointestinal anthrax), inhaled (inhalation anthrax), or entering the body through an open wound (cutaneous). Anthrax is not contagious. Symptoms of anthrax exposure can appear within 7 days for cutaneous anthrax and up to 42 days for inhalation anthrax. A symptom of cutaneous anthrax is a small sore that develops into a blister and then into a skin ulcer with a black area in the center. The sore, blister and ulcer do not hurt. The key symptoms of inhalation anthrax are like cold or flu symptoms and can include a sore throat, mild fever, muscle aches, cough, chest discomfort, shortness of breath, tiredness and muscle aches. Symptoms of gastrointestinal anthrax include nausea, loss of appetite, bloody diarrhea, and fever, followed by bad stomach pain.

Arsenic is a naturally occurring element. Inorganic arsenic is used in wood preservation. Organic arsenic, which is less toxic, is used in pesticides. Breathing high levels of arsenic can give you a sore throat or irritated lungs. Ingesting high levels of inorganic arsenic can result in death. Lower levels of arsenic can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and appearance of small "corns" or "warts" on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling.

Arsine is a colorless, flammable, and highly toxic gas that does not burn the eyes, nose or throat. At high concentrations it has a garlic-like or fishy odor, but odor is not an adequate indicator of arsine's presence and does not provide reliable warning of hazardous concentrations. Arsine exposure can be through inhalation, ingestion or contact with the skin and eyes. Arsine is heavier than air and will fall to low-lying areas. Initial symptoms, which can develop within 2-24 hours of exposure and include: malaise, dizziness, nausea, shortness of breath and abdominal pain.

Benzene is a colorless, highly flammable liquid with a sweet odor. Breathing high levels of benzene can cause dizziness, rapid heart rate, headaches, tremors, confusion, unconsciousness and even death. Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness convulsions, rapid heart rate, and death.

Blister Agents are a type of chemical that blister the skin and mucous membranes on contact. *See Lewisite and Sulfur Mustard for more information.*

Botulinum Toxins are bacterial toxins that can make a person sick if ingested, inhaled or entering the body through an open wound. A person exposed will likely get sick within 12-36 hours of exposure. Symptoms of botulism include double vision, blurred vision, drooping eyelids, slurred

speech, difficultly swallowing, dry mouth, and muscle weakness.

Brucellosis is an infectious disease caused by a bacteria common in animals. The bacteria can affect humans if ingested, inhaled or entering the body through an open wound. Symptoms include fever, sweats, headaches, back pains and physical weakness.

Bubonic Plague occurs when an infected flea bites a person or when materials contaminated with the bacteria enter through a break in the skin. Patients develop swollen, tender lymph glands and fever, headache, chills, and weakness. Bubonic plague cannot be spread from person to person. *See "Plague" for a complete description.*

Cesium is a naturally occurring element that in its natural form is not radioactive. Two forms of radioactive cesium can be produced by nuclear explosions. Exposure to large amounts of radioactive cesium can damage cells in your body from radiation. Symptoms of exposure include: nausea, vomiting, diarrhea, bleeding, coma, and even death. Increased rates of cancer might be expected among individuals acutely exposed to very high levels of radiation from a radioactive cesium source. *See "Acute Radiation Syndrome" for more information.*

Chlorine is a yellow-green gas at room temperature that is heavier than air and has a strong irritating odor. It can be converted to liquid under pressure or cold temperatures. Chlorine gas can cause irritation of the eyes, skin and respiratory tract. Exposure to high levels can result in corrosive damage to the eyes, skin, and respiratory tissues, and could lead to pulmonary edema and even death.

Cholera is an acute, diarrheal illness caused by a bacterial infection of the intestine. A person may get cholera by drinking water or eating food contaminated with the cholera bacterium. The infection is often mild or without symptoms but in some people, the disease is characterized by profuse watery diarrhea, vomiting, and leg cramps.

Cobalt is a naturally occurring element found in rocks, soil, water, plants and animals that has radioactive and non-radioactive forms. Radioactive cobalt is used to sterilize medical equipment and consumer products and for radiation therapy for treating cancer patients. Exposure to high levels of cobalt can result in lung and heart damage, dermatitis, and liver and kidney damage. Exposure may also lead to Acute Radiation Syndrome. *See "Acute Radiation Syndrome" for more information.*

Dirty Bomb refers to the use of common explosives to spread radioactive materials over a targeted area. Also known as a radiation attack, a "dirty bomb" is not a nuclear blast, but rather an explosion with localized radioactive contamination. *See "Radiation" for more information.*

Escherichia coli (E-coli) is a food borne illness. Infection often leads to bloody diarrhea and abdominal cramps. Usually little or no fever is present, and the illness resolves in 5 to 10 days. However, children and the elderly can develop more severe symptoms. *See "Food-borne Illness" for more information.*

Food-borne Illnesses are caused by consuming contaminated foods or beverages. There are more than 250 different food borne diseases. Most of these diseases are infections, caused by a variety of bacteria, viruses, and parasites. You should contact a doctor if a diarrheal illness is accompanied by high fever (temperature over 101.5 F, measured orally), blood in the stools, prolonged vomiting that prevents keeping liquids down (which can lead to dehydration), signs of dehydration including a decrease in urination, a dry mouth and throat, and feeling dizzy when standing up, or if the diarrheal illness lasts more than 3 days.

Lewisite (and Mustard Lewisite Mixture) is an oily, colorless liquid with an odor like geraniums. Mustard-Lewisite Mixture is a liquid with a garlic-like odor. Symptoms of exposure to Lewisite agents include: immediate irritation of airways, burning pain in the nose and sinuses, laryngitis, cough, shortness of breath, nausea, vomiting, airway tissue damage, accumulation of fluid in your lungs and death. Contact between the skin and liquid will result in local pain, swelling, and rash, followed by blistering that might be delayed for hours. If vapors or liquid contact eyes, immediate pain and rapid swelling, as well as serious damage to the cornea and other parts of the eye would follow. Ingestion will burn the mouth and throat, will cause severe stomach pain, nausea, vomiting, and bloody stools.

Mustard Gas refers to several manufactured chemicals. It is actually a colorless and odorless liquid. Mustard gas can cause skin burns and blisters, especially around sweaty parts of the body. Symptoms of mustard gas exposure include burning of the eyes, eyelids swelling, excessive blinking, coughing, bronchitis, long-term respiratory disease, and death.

Nerve Agents are manufactured compounds such as GA (tabun), GB (sarin), GD (soman) and VX. The G-type agents are clear, colorless and tasteless liquids. GB is odorless. GA has a lightly fruity odor, and GD has a slightly camphor-like odor. VX is a clear, amber-colored, odorless, oily liquid. Even in very small amounts, nerve agents are highly toxic if you inhale or swallow them, or if they come in contact with your skin or eyes. Symptoms of nerve agents include: runny nose, chest tightness, pinpoint pupils, shortness of breath, excessive salivation and sweating, nausea, vomiting, abdominal cramps, involuntary defecation, urination, muscle twitching, confusion, seizures, paralysis, coma, respiratory paralysis, and death. Incapacitating effects occur within 1 to 10 minutes and fatal effects can occur within 1 to 10 minutes for GA, GB and GD and within 4 to 18 hours for VX.

Plague is a disease caused by bacteria found in rodents and their fleas. It naturally occurs in many areas of the world, including the United States. There are three different types of plague: Pneumonic, bubonic and septicemic. Pneumonic plague occurs when the bacteria enters the lungs and is contagious. Patients with Pneumonic Plague develop swollen, tender lymph glands and fever, headache, chills, and weakness. Bubonic plague occurs when an infected flea bites a person or when materials contaminated with the bacteria enter through a break in the skin. Bubonic plague cannot be spread from person to person, but if untreated, it can spread to the lungs and cause Pneumonic Plague. Septicemia plague occurs when the plague bacteria multiplies in the blood. Patients with Septicemia Plague have fever, chills, prostration, abdominal pain, shock, and bleeding into skin and other organs.

Plutonium is a radioactive material produced when uranium absorbs an atomic particle. Trace amounts of plutonium occur naturally, but large amounts have been produced in nuclear reactors. It has been found to cause lung, liver, and bone cancer in animals, but has not been shown to cause adverse health effects in people.
See "Acute Radiation Syndrome" for more information.

Potassium Iodine (KI) is a nonprescription drug used as a "blocking agent" to prevent the human thyroid gland from absorbing radioactive iodine. KI is a salt of iodine. It is one of several ingredients that can be added to table salt to make it iodized.

Q fever is a bacterial disease. Only about one-half of all people infected with the bacteria show signs of clinical illness. Acute cases of Q fever begin with sudden onset of one or more of the following: high fevers (up to 104-105º F), severe headache, general malaise, confusion, sore throat, chills, sweats, non-productive cough, nausea, vomiting, diarrhea, abdominal pain, and chest pain. Fever usually lasts for 1 to 2 weeks. Weight loss can occur and persist for some time.

Radiation is a form of energy that is present all around us. People are exposed to small amounts of radiation every day, both from naturally occurring sources (such as elements in the soil or cosmic rays from the sun), and manmade sources such as microwaves and television sets. The adverse health effects of exposure to radiation may not be apparent for many years and can range from skin reddening to serious effects such as cancer depending on the length of exposure and dose. Exposure to very large doses of radiation may cause death within a few days or months. *See "Dirty Bomb" for more information.*

Ricin is a poison that can be made from the waste left over from processing castor beans. It can be in the form of a powder, a mist, or a pellet and it can be dissolved in water or weak acid. Ricin is not contagious. Ricin works by preventing cells from making proteins they need. Initial symptoms of ricin exposure include: coughing, tightness in the chest, difficulty breathing, nausea, and aching muscles. Within hours, more serious symptoms, even death, can occur.

Riot Control Agents, sometimes referred to as "tear gas," are chemicals that temporarily make people unable to function by causing irritation to the eyes, mouth, throat, lungs and skin. Riot control agents cause irritation to the area of contact within

seconds of exposure but the effects are usually short-lived (15-30 minutes) after the person has been removed from the source and decontaminated. The immediate symptoms include excessive tearing, eye redness, burning in the eyes, nose, mouth, lungs, skin; irritation of the mouth, drooling, difficulty swallowing; chest tightness, choking sensation, noisy breathing, shortness of breath, nausea and vomiting. Long-lasting exposure may cause blindness, glaucoma, immediate death due to severe chemical burns to the throat and lungs and respiratory failure.

Salmonellosis is a bacterial infection. Symptoms of Salmonella include diarrhea, fever, and abdominal cramps 12 to 72 hours after infection. The illness usually lasts 4 to 7 days, and most people recover without treatment. The elderly, infants, and those with impaired immune systems are more likely to have a severe illness.

Sarin (GB) is a man-made chemical agent classified as a nerve agent. It is a clear, colorless, and tasteless liquid that has no odor in its pure form. Following the release of sarin into the air, people can be exposed through skin contact or eye contact and through inhalation. Sarin mixes easily with water, so it could be used to poison water. Following release of sarin into water, people can be exposed by touching or drinking water that contains sarin. A person's clothing can emit sarin for about 30 minutes after it has come in contact with sarin vapor, which can lead to exposure of other people. Symptoms will appear within a few seconds after exposure to the vapor form of sarin and from a few minutes to 18 hours after exposure to the liquid form. People may not know that they were exposed to sarin because it has no odor. People exposed to a low or moderate dose of sarin may experience some or all of the following symptoms within seconds to hours of exposure: runny nose, watery eyes, pinpoint pupils, eye pain, blurred vision, drooling, excessive sweating, cough, chest tightness, rapid breathing, diarrhea, increased urination, confusion, drowsiness, weakness, headache, nausea, vomiting, abdominal pain, slow or fast heart rate, and low or high blood pressure. Even a small drop of sarin on the skin can cause sweating and muscle twitching where sarin touched the skin. Exposure to large doses of sarin by any route may result in loss of consciousness, convulsions, paralysis, respiratory failure and death. *For more information see "Nerve Agents."*

Shigellosis is an infectious disease caused by a group of bacteria. The symptoms of Shigellosis include bloody diarrhea, fever, and stomach cramps starting a day or two after exposure to the bacterium.

Smallpox is a serious, contagious, and sometimes fatal viral infection. Exposure to the virus is followed by an incubation period during which people do not have any symptoms and may feel fine. The incubation period averages about 12 to 14 days but can range from 7 to 17 days. During this time, people are not contagious.

The first symptoms of smallpox include fever (101 to 104º F), malaise, head and body aches, and sometimes vomiting. After 2 to 4 days of the initial symptoms, a rash emerges first as small red spots on the tongue and in the mouth. These spots develop into sores that break open and spread large amounts of the virus into the mouth and throat. At this time, the person becomes most contagious.

Around the time the sores in the mouth break down, a rash appears on the skin, starting on the face and spreading to the arms and legs and then to the hands and feet. Usually the rash spread to all parts of the body within 24 hours. As the rash appears, the fever usually falls and the person may start to feel better.

By the third day of the rash, the rash becomes raised bumps. By the fourth day, the bumps fill with a thick, opaque fluid and often have a depression in the center that looks like a bellybutton. (This is a major distinguishing characteristic of smallpox.) Fever will often rise again at this time and remain high until scabs form over the bumps.

After about 5 days, bumps become pustules—sharply raised, usually round and firm to the touch as if there's a small round object under the skin.

The pustules begin to form a crust and then scab. By the end of the second week after the rash appears most of the sores have scabbed over. The scabs begin to fall off, leaving marks on the skin that eventually become pitted scars. Most scabs will have fallen off three weeks after the rash appears. The person is contagious to others until all of the scabs have fallen off. Once the scabs have fallen off, an individual is no longer contagious.

Soman is a man-made chemical classified as a nerve agent. Soman is clear, colorless, and tasteless with a slight camphor-like odor or rotting fruit odor and can become a vapor if heated. People can be exposed to soman through skin contact, eye contact or inhalation. Soman mixes easily with water, so it could be used to poison water. Symptoms will appear within a few seconds after exposure to the vapor form of soman, and within a few minutes to up to 18 hours after exposure to the liquid form. Although soman has a camphor or fruity odor, the odor may not be noticeable enough to give people sufficient warning against a toxic exposure. People exposed to a low or moderate dose of soman by inhalation, ingestion (swallowing), or skin absorption may experience some or all of the following symptoms within seconds to hours of exposure: runny nose, watery eyes, pinpoint pupils, eye pain, blurred vision, drooling, excessive sweating, cough, chest tightness, rapid breathing, diarrhea, increased urination, confusion, drowsiness, weakness, headache, nausea, vomiting, abdominal pain, slow or fast heart rate, abnormally low or high blood pressure. Even a drop of nerve agent on the skin can cause sweating and muscle twitching where the agent touched the skin. Exposure to large doses of soman by any route may cause loss of consciousness, convulsions, paralysis, respiratory failure and death. *See "Nerve Agent" for more information.*

Strontium is a naturally occurring element. People can be exposed to strontium through inhalation or ingesting contaminated substances. In children, high levels of stable strontium can impair bone growth. High levels of radioactive strontium can cause anemia or cancer. *See "Acute Radiation Syndrome" for more information.*

Sulfur Mustard is a blister chemical agent that sometimes smells like garlic, onions or mustard and sometimes has no odor. It can be a vapor, an oily-textured liquid, or a solid. Sulfur mustard can be clear to yellow or brown when it is in liquid or solid form. Exposure to sulfur mustard is usually not fatal. People may not know right away that they have been exposed, because sulfur mustard often has no smell or has a smell that might not cause alarm. Typically, symptoms do not occur immediately but within 2 to 24 hours depending on the severity of exposure. Sulfur mustard can cause redness and itching of the skin and change eventually to yellow blistering of the skin. It may cause irritation, pain, swelling, and tearing of the eyes within 3 to 12 hours. Severe exposure may cause symptoms within 1 to 2 hours and may cause light sensitivity, severe pain or blindness (lasting up to 10 days). Effects on the respiratory tracts include runny nose, sneezing, hoarseness, bloody nose, sinus pain, shortness of breath, and cough within 12 to 24 hours of a mild exposure and within 2 to 4 hours of a sever exposure. This may be accompanied by abdominal pain, diarrhea, fever, nausea, and vomiting.

Syrup of Ipecac is a medicine used to induce vomiting in the case of poisoning.

Tabun is a man-made chemical classified as a nerve agent. It is a clear, colorless, tasteless liquid with a faint fruity odor. People can be exposed through skin contact, eye contact, or inhalation. Symptoms will appear within a few seconds after exposure to the vapor form of tabun, and within a few minutes up to 18 hours after exposure to the liquid form. Tabun is an immediate but short-lived threat and does not last a long time in the environment. Symptoms of exposure to low or moderate doses of tabun include: runny nose, watery eyes, pinpoint pupils, eye pain, blurred vision, drooling, excessive sweating, cough, chest tightness, rapid breathing, diarrhea, increased urination, confusion, drowsiness, weakness, headache, nausea, vomiting, abdominal pain, slow or fast heart rate, and abnormally low or high blood pressure. Symptoms of large dose exposure include: loss of consciousness, convulsions, paralysis, respiratory failure and death. *See "Nerve Agent" for more information.*

Thyroid Gland: A butterfly shaped gland that lies across the base of the neck in front of the windpipe that produces thyroid hormone. The main function of the thyroid gland is to create, store, and release thyroid hormones. These hormones regulate the body's metabolism.

Tularemia is an extremely contagious bacterial disease that is usually found in animals. It is also known as "rabbit fever" or "deer fly fever." The bacteria are naturally occurring in soil, water and vegetation in rural

areas. It can enter the body through mucous membranes, gastrointestinal tract and lungs. Once in the body, tularemia multiply inside specialized white blood cells of the immune system killing the body's foreign invaders. Onset of illness usually occurs between 3-5 days of exposure but can take up to 14 days.

Typhoid Fever is a life-threatening, contagious, bacterial illness. In the United States, 400 cases occur each year. Typhoid fever is still common in the developing world, where it affects about 12.5 million persons each year. People with typhoid fever carry the bacteria in their bloodstream and intestinal tract. The bacteria that causes typhoid fever is shed in the feces (stool) and people can get typhoid fever if they eat or drink beverages that have been handled by a person who is shedding the bacteria or if sewage contaminated by the bacteria gets into the water used for drinking or washing food.

Uranium is a common naturally occurring and radioactive substance. Large amounts of uranium can react with the tissues in your body and damage your kidneys and can cause cancer. *See also "Acute Radiation Syndrome" for more information.*

Viral Hemorrhagic Fevers refers to a group of illnesses that are caused by several distinct families of viruses and generally describes a severe syndrome that affects multiple organs. The overall vascular system is affected, and the body's ability to regulate itself is impaired. These symptoms are often accompanied by hemorrhage (bleeding); however, the bleeding is itself rarely life-threatening. The initial symptoms of VHF included marked fever, fatigue, dizziness, muscle aches, loss of strength, and exhaustion. Patients with severe cases of VHF often show signs of bleeding under the skin, in internal organs, or from body orifices like the mouth, eyes or ears. However, although they may bleed from many sites around the body, patients rarely die because of blood loss. Severely ill patient cases may also show shock, nervous system malfunction, coma, delirium, and seizures. Some types of VHF are associated with kidney failure.

VX is a manmade chemical warfare agent classified as a nerve agent. It is an oily, amber colored liquid that evaporates about as slowly as motor oil. People can be exposed through skin contact, eye contact or inhalation (breathing in the VX mist). VX vapor is heavier than air and it will sink to low-lying areas. Symptoms will appear within a few seconds after exposure to the vapor form of VX, and within a few minutes up to 18 hours after exposure to the liquid form. VX is the most potent of all the nerve agents. It is possible that any visible VX liquid contact on the skin, unless washed off immediately, would be lethal. People exposed to a low or moderate dose of VX by inhalation, ingestion or skin absorption may experience runny nose, watery eyes, pinpoint pupils, eye pain, blurred vision, drooling, excessive sweating, cough, chest tightness, rapid breathing, diarrhea, increased urination, confusion, drowsiness, weakness, headache, nausea, vomiting, abdominal pain, slow or fast heart rate, and abnormally low or high blood pressure. Exposure to large doses of VX by any route may cause loss of consciousness, convulsions, paralysis, respiratory failure and death. *See "Nerve Agent" for more information.*

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